

[illegible]

10

15

20

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tac aca aac aga tcc tgt gaa gag tgc ctc agg aat gtc tcc tgt ctg 199  
 Tyr Thr Asn Arg Ser Cys Glu Glu Cys Leu Arg Asn Val Ser Cys Leu  
 40 45 50 55

tgg tgc aat gag aac aag gcg tgt atg gac tac cca gtg agg aaa atc 247  
 Trp Cys Asn Glu Asn Lys Ala Cys Met Asp Tyr Pro Val Arg Lys Ile  
 60 65 70

ttg ccc cct gct tct ctc tgt aaa ttg agt tcc gct cgc tgg ggc gta 295  
 Leu Pro Pro Ala Ser Leu Cys Lys Leu Ser Ser Ala Arg Trp Gly Val  
 75 80 85

tgc tgg gtg aac ttc gag gcc ttg atc atc acc atg tgc gtc ctg ggg 343  
 Cys Trp Val Asn Phe Glu Ala Leu Ile Ile Thr Met Ser Val Leu Gly  
 90 95 100

ggc tct gtg ctc ctg ggc atc act gtg tgc tgc tgc tac tgc tgc cgc 391  
 Gly Ser Val Leu Leu Gly Ile Thr Val Cys Cys Cys Tyr Cys Cys Arg  
 105 110 115

cgg aag aag agc cgg aag cca gac aag agc gat gag cgg gcc atg aga 439  
 Arg Lys Lys Ser Arg Lys Pro Asp Lys Ser Asp Glu Arg Ala Met Arg  
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gag cag gag gag agg aga gtg cgg cag gag gaa agg agg gcg gaa atg 487  
 Glu Gln Glu Glu Arg Arg Val Arg Gln Glu Glu Arg Arg Ala Glu Met  
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aag tca aga cat gat gaa atc agg aaa aaa tac ggt ctg ttt aaa gaa 535  
 Lys Ser Arg His Asp Glu Ile Arg Lys Lys Tyr Gly Leu Phe Lys Glu  
 155 160 165

caa aac ccg tat gag aag ttc taaggtggct ggcacacact tgtggtggat 586  
 Gln Asn Pro Tyr Glu Lys Phe  
 170

cgctgcagttc cagagtttcc tgggaatgca ctccccagca gagcctgcag agacctcacc 646  
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 cccatcaaca tgggtcctgt gcccgctccc tatgtccccc ctctgcccaa cgtgcgtgtc 180  
 aactatgact ttggccacat gcacgtgccc ctggagcaca acctgcccat gcactttggc 240  
 ccccaaccac ggcacgtcgt ctgacaccca aagccctgtc agccgtgccg agtctgtagg 300  
 agggccacgt ctcactctct gaggtagggg gaaggcctcc attccctctc gaaagtgagc 360



100

105

110

gag tcg cac ctt tcg gac cag ctg acc ttg cac gtg gat gtg gct ggc 537  
Glu Ser His Leu Ser Asp Gln Leu Thr Leu His Val Asp Val Ala Gly  
115 120 125

aac gtg gtg ggc ctg tct gtg gtg gtg tac cct ggg ggc tgc cgg ggc 585  
Asn Val Val Gly Leu Ser Val Val Val Tyr Pro Gly Gly Cys Arg Gly  
130 135 140 145

tcc gag gtg gaa gat gag gac ctg gag ctg ttc aat aca tct gtg cag 633  
Ser Glu Val Glu Asp Glu Asp Leu Glu Leu Phe Asn Thr Ser Val Gln  
150 155 160

ctg cgg cct ccc agc act gct cca ggc ccc gag act gca gcc ttc att 681  
Leu Arg Pro Pro Ser Thr Ala Pro Gly Pro Glu Thr Ala Ala Phe Ile  
165 170 175

gag cgc ctg gag atg gag cag gcc cag aag gcc aag aac cca cag gag 729  
Glu Arg Leu Glu Met Glu Gln Ala Gln Lys Ala Lys Asn Pro Gln Glu  
180 185 190

cag aag tct ttc ttt gcc aaa tac tgg atg tac atc att cca gtt gtg 777  
Gln Lys Ser Phe Phe Ala Lys Tyr Trp Met Tyr Ile Ile Pro Val Val  
195 200 205

ctg ttc ctc atg atg tcg gga gcg ccg gac gct ggg ggc cag ggc ggc 825  
Leu Phe Leu Met Met Ser Gly Ala Pro Asp Ala Gly Gly Gln Gly Gly  
210 215 220 225

ggt ggg ggc ggg ggc agc agc cgg tgagcagctg tgccacctag agcccccccc 879  
Gly Gly Gly Gly Gly Ser Ser Arg  
230

agagccagcc	caagaaggag	ttcctgacc	cacatttccc	tattgcatga	atatggaagg	939
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gattgtcttg	cagctcagc	tgtgttgtgt	ggcgtctgat	taaacgtgcc	cctaaccagc	1599
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<211> 1197

<212> DNA

&lt;213&gt; Mouse

<220>

&lt;221&gt; CDS

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Ala	Leu	Ile	Leu	Trp	Leu	Leu	Arg	Gly	Asp	Ser	Gly	Ala	Pro	Gly	Lys	
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gac	ggg	gtt	gcg	gag	ccg	ccg	cag	aag	ggc	gca	cct	cct	ggg	gag	gct	145
Asp	Gly	Val	Ala	Glu	Pro	Pro	Gln	Lys	Gly	Ala	Pro	Pro	Gly	Glu	Ala	
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gcg	gcc	ccg	gga	gac	ggg	ccg	ggg	ggg	ggc	ggc	agg	ggc	ggc	ctg	agc	193
Ala	Ala	Pro	Gly	Asp	Gly	Pro	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Leu	Ser	
35																
cct	gaa	cct	tcc	gat	cgg	gag	ctg	gtc	tcc	aaa	gca	gag	cat	ctt	cga	241
Pro	Glu	Pro	Ser	Asp	Arg	Glu	Leu	Val	Ser	Lys	Ala	Glu	His	Leu	Arg	
50																
gaa	agc	aac	gga	cat	tgg	att	tct	gag	agc	aaa	gat	ctt	ggg	aac	ctg	289
Glu	Ser	Asn	Gly	His	Leu	Ile	Ser	Glu	Ser	Lys	Asp	Leu	Gly	Asn	Leu	
70																
ccg	gaa	gca	cag	cgg	ctg	cag	aat	gtt	gga	gca	gac	tgg	gtc	aat	gcc	337
Pro	Glu	Ala	Gln	Arg	Leu	Gln	Asn	Val	Gly	Ala	Asp	Trp	Val	Asn	Ala	
85																
aga	gag	tth	gtt	cct	gtt	ggg	aag	att	cca	gac	aca	cac	tcc	agg	gcc	385
Arg	Glu	Phe	Val	Pro	Val	Gly	Lys	Ile	Pro	Asp	Thr	His	Ser	Arg	Ala	
100																
gac	tct	gaa	gcg	gca	aga	aat	caa	agc	cca	gga	tct	cat	gga	gga	gaa	433
Asp	Ser	Glu	Ala	Ala	Arg	Asn	Gln	Ser	Pro	Gly	Ser	His	Gly	Gly	Glu	
115																
tgg	aga	ctc	ccc	aaa	gga	caa	gaa	aca	gct	gtc	aaa	gta	gct	ggc	agt	481
Trp	Arg	Leu	Pro	Lys	Gly	Gln	Glu	Thr	Ala	Val	Lys	Val	Ala	Gly	Ser	
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gtg	gcc	gca	aag	ctg	gcc	tcc	agc	agc	ctg	ctt	gtg	gac	aga	gct	aaa	529
Val	Ala	Ala	Lys	Leu	Ala	Ser	Ser	Ser	Leu	Leu	Val	Asp	Arg	Ala	Lys	
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gca	gtc	agt	cag	gac	cag	gca	ggc	cac	gag	gac	tgg	gaa	gtg	gtg	tct	577
Ala	Val	Ser	Gln	Asp	Gln	Ala	Gly	His	Glu	Asp	Trp	Glu	Val	Val	Ser	
165																
agg	cac	tca	tct	tgg	ggg	agt	gtt	ttg	ggg	ggc	agg	ctt	gag	gct		625
Arg	His	Ser	Ser	Trp	Gly	Ser	Val	Gly	Leu	Gly	Ser	Leu	Glu	Ala		
180																
tct	agg	tta	agt	cta	aat	cag	aga	atg	gac	gac	agc	aca	aac	agt	ctt	673
Ser	Arg	Leu	Ser	Leu	Asn	Gln	Arg	Met	Asp	Asp	Ser	Thr	Asn	Ser	Leu	
195																
gtg	gga	gga	aga	ggc	tgg	gaa	gta	gat	ggg	aaa	gtg	gca	tct	ctg	aaa	721
Val	Gly	Gly	Arg	Gly	Trp	Glu	Val	Asp	Gly	Lys	Val	Ala	Ser	Leu	Lys	
210																
225																

cct caa cag gtc agc atc cag ttc cag gtg cac tac acc aca aac acc	769
Pro Gln Gln Val Ser Ile Gln Phe Gln Val His Tyr Thr Thr Asn Thr	
230 235 240	

gat gtg cag ttc att gca gtg act gga gac cat gag agc ctt ggg aga	817
Asp Val Gln Phe Ile Ala Val Thr Gly Asp His Glu Ser Leu Gly Arg	
245 250 255	

tgg aac aca tac atc cca ctc cac tac tgc aaa gac ggg ctc tgg tct	865
Trp Asn Thr Tyr Ile Pro Leu His Tyr Cys Lys Asp Gly Leu Trp Ser	
260 265 270	

cat tct gtc ttc ctg cct gca gac aca gtg gtg gag tgg aag ttc gtg	913
His Ser Val Phe Leu Pro Ala Asp Thr Val Val Glu Trp Lys Phe Val	
275 280 285	

ttg gta gag aat aag gaa gtt act cgt tgg gaa gaa tgc agc aat aga	961
Leu Val Glu Asn Lys Glu Val Thr Arg Trp Glu Glu Cys Ser Asn Arg	
290 295 300 305	

ttc ctg cag act ggc cat gag gat aaa gtg gtt cat ggg tgg tgg ggg	1009
Phe Leu Gln Thr Gly His Glu Asp Lys Val Val His Gly Trp Trp Gly	
310 315 320	

att cac tgactcagtt ttcagagcat ccaagaggct gcagcagaat gtggacaagg	1065
Ile His	

ctaaggcttt agagcgcaact gcatagctta aagtaaaggc ggtgtgattc caattgtagc	1125
catcagggct ctttcagatt tgctagtgtg gcttttgtcc aaaatgtagg aagatgtatg	1185
cctgcagata atgcttccctg taanctggca cttgtccctt attgtattga ctggtttgtg	1245
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ctgaggtatg gactacatat gggcaaggag caactaagca actgcacggg tacaaggtag	1365
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gcctggggag tgatcatgtt gataatgctc gggatatttt tcaatgtcca tctctgtgtg	180
ttaatgtagg acgttccctt cacagagaaa gattttgaga acggctctca gaacatatac	240
aacctgtacg agcaagtcat ctacaactgt ttcatcgccg cgggcctcta cctctcctc	300
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tcctactcat tggcgctctt ttgggaactg tgaccctagc gagactcat cctcgccct	480
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ttctgcgcgg gagcccgagc ggccggctgc cgggctctcc gtggtttcca gctcgcgtgg	840
tggtggtggc ggcggagcgt ctccgtgagg aggtgcgcgg ggccatgacg tcacgcgtcca	900

ccaaggttg	agagatcttc	tccgcggccg	gcgcgcgctt	cacgaagctc	ggggagttga	960
cgatgcagct	gcattccagtc	tcggactctt	cccctgcggg	tgccaagtgg	acggagacgg	1020
agatagagat	gctgagggct	gctgtgaagc	gctttgggga	cgatcttaat	cacatcagct	1080
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<211> 1357

<212> DNA

<213> Mouse

<220>

<221> CDS

<222> (150)...(989)

<400> 8

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ttcaccacaga	gctgggtcca	tagctcaac	atg gtc ccc	tgg ttc ctc	ctg tct	173
			Met Val Pro	Trp Phe Leu Leu Ser		
			1	5		

ctg ctg cta ctt	gcg agg	cct gtg	cct ggg	gtg gcc	tac tct	gtg tca	221
Leu Leu Leu Leu	Ala Arg	Pro Val	Pro Gly	Val Ala	Tyr Ser	Val Ser	
10	15			20			

ctc ccg gcc tcc	ttc ctg	gag gat	gta gcc	ggc agc	ggg gaa	gct gag	269
Leu Pro Ala Ser	Phe Leu	Glu Asp	Val Ala	Gly Ser	Gly Glu	Ala Glu	
25	30			35		40	

ggg tct tca gcc	tct tcc	ccg agc	ctg ccg	ccg cct	ggg act	cca gcc	317
Gly Ser Ser Ala	Ser Ser	Pro Ser	Leu Pro	Pro Pro	Gly Thr	Pro Ala	
	45		50		55		

ttc agt ccc aca	ccg gag	aga ccc	cag ccc	aca gct	ctg gac	ggc ccc	365
Phe Ser Pro Thr	Pro Glu	Arg Pro	Gln Pro	Thr Ala	Leu Asp	Gly Pro	
	60		65		70		

gtg cca ccc acc	aac ctc	ctg gaa	ggg atc	atg gat	ttc ttc	ccg cag	413
Val Pro Pro Thr	Asn Leu	Leu Glu	Gly Ile	Met Asp	Phe Phe	Arg Gln	
	75		80		85		

tac gtg atg ctc	atc gcg	gtg gtg	ggc tgc	ctg acc	ttc ctc	atc atg	461
Tyr Val Met Leu	Ile Ala	Val Val	Gly Ser	Leu Thr	Phe Leu	Ile Met	
	90		95		100		

ttc ata gtc tgc	gcc gcc	ctc atc	acg cgc	cag aag	cac aag	gcc aca	509
Phe Ile Val Cys	Ala Ala	Leu Ile	Thr Arg	Gln Lys	His Lys	Ala Thr	
105	110		115		120		

gcc tac tac cca	tcc tcg	ttc cct	gaa aag	aag tat	gtg gac	cag aga	557
Ala Tyr Tyr Pro	Ser Ser	Phe Pro	Glu Lys	Lys Tyr	Val Asp	Gln Arg	
	125		130		135		

gac ccg gct ggg	gga ccc	cgt acc	ttc agc	gag gtc	cct gac	agg gca	605
Asp Arg Ala Gly	Gly Pro	Arg Thr	Phe Ser	Glu Val	Pro Asp	Arg Ala	
	140		145		150		

00276260.022579



cct gac agc cgg caa gaa gaa ggc ctg gac acc tcc cat cag ctg cag	653
Pro Asp Ser Arg His Glu Glu Gly Leu Asp Thr Ser His Gln Leu Gln	
155 160 165	
gct gac att ctg gct gct acc cag aac ctg cgg tct cca gct aga gcc	701
Ala Asp Ile Leu Ala Ala Thr Gln Asn Leu Arg Ser Pro Ala Arg Ala	
170 175 180	
ctg cca ggc aat ggg gag gga gca aag cct gtg aag ggt ggg tcg gag	749
Leu Pro Gly Asn Gly Glu Gly Ala Lys Pro Val Lys Gly Gly Ser Glu	
185 190 195 200	
gag gag gag gaa gag gtg ctg agc ggt cag gag gag gcc cag gaa gcc	797
Glu Glu Glu Glu Glu Val Leu Ser Gly Gln Glu Glu Ala Gln Glu Ala	
205 210 215	
cca gta tgt ggg gtc act gaa gag aag ctg ggg gtc cca gag gag tcg	845
Pro Val Cys Gly Val Thr Glu Glu Lys Leu Gly Val Pro Glu Glu Ser	
220 225 230	
gtc tca gca gag gct gaa ggg gtt cct gcc acc agt gag ggc caa ggg	893
Val Ser Ala Glu Ala Glu Gly Val Pro Ala Thr Ser Glu Gly Gln Gly	
235 240 245	
gaa gca gaa ggg tct ttc tcc tta gcc cag gaa tcc cag gga gca act	941
Glu Ala Glu Glu Gly Ser Phe Ser Leu Ala Gln Glu Ser Gln Gly Ala Thr	
250 255 260	
ggt cct cct gaa agt ccc tgt gcc tgc aac aga gtc tcc ccc agt gtc	989
Gly Pro Pro Glu Ser Pro Cys Ala Cys Asn Arg Val Ser Pro Ser Val	
265 270 275 280	
taacaggccc cagaactgct gggaccgcgaa tgttgggtcc ttgagggtca cctcttgggt	1049
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atg gcg ctg tgc gcg cgg gcc gcg ctg ctg ctg ggc gtg ctg cag gtg	166
Met Ala Leu Cys Ala Arg Ala Ala Ala Leu Leu Leu Gly Val Leu Gln Val	

-25

-20

-15

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 -10 -5 1

gca agt gga aac cac tca gtg ctg acc tcc aat att aac ata aca gag 262  
 Ala Ser Gly Asn His Ser Val Leu Thr Ser Asn Ile Asn Ile Thr Glu  
 5 10 15

aat acc aac cag acc atg agt gtg gtt tcc aac cag acc agt gaa atg 310  
 Asn Thr Asn Gln Thr Met Ser Val Val Ser Asn Gln Thr Ser Glu Met  
 20 25 30 35

cag agc acc gcg aag cct tcc gta ctg cca aaa act acc aca ctt atc 358  
 Gln Ser Thr Ala Lys Pro Ser Val Leu Pro Lys Thr Thr Thr Ile  
 40 45 50

act gtg aaa cct gca act att gtt aaa ata tca acc cca gga gtc tta 406  
 Thr Val Lys Pro Ala Thr Ile Val Lys Ile Ser Thr Pro Gly Val Leu  
 55 60 65

cca cat gtg acg cct act gcc tca aag tct aca ccc aat gca agt gct 454  
 Pro His Val Thr Pro Thr Ala Ser Lys Ser Thr Pro Asn Ala Ser Ala  
 70 75 80

tct cca aac tct acc cac acg tca gca tcc atg aca acc cca gcc cac 502  
 Ser Pro Asn Ser Thr His Thr Ser Ala Ser Met Thr Thr Pro Ala His  
 85 90 95

agt agt tta ttg aca act gta acg gtt tca gca act act cat ccc acc 550  
 Ser Ser Leu Leu Thr Thr Val Thr Val Ser Ala Thr Thr His Pro Thr  
 100 105 110 115

aaa ggc aaa gga tcc aag ttt gat gcc ggc agc ttt gtt ggt ggt ata 598  
 Lys Gly Lys Gly Ser Lys Phe Asp Ala Gly Ser Phe Val Gly Gly Ile  
 120 125 130

ggg gtt aac act ggg agt ttt atc tat tct cta cat tgg atg caa aat 646  
 Gly Val Asn Thr Gly Ser Phe Ile Tyr Ser Leu His Trp Met Gln Asn  
 135 140 145

gta tta ttc aag aag agg cat tcg gta ccg aag cat tgacgaacat 692  
 Val Leu Phe Lys Lys Arg His Ser Val Pro Lys His  
 150 155

gatgccatca tttaaagtac ttccagtggc aaggaaagaa gaaagactgc agccttatca 752  
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 tgc 815

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<220>  
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<222> (13)...(90)

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Leu Val Trp Thr Val Gly Ser Val Gly Ala Val Met Gly Ser Glu Asp	
-10 -5 1	
tct gtg ccc ggt ggc gtg tgc tgg ctc cag cag ggc aga gag gcc acc	147
Ser Val Pro Gly Gly Val Cys Trp Leu Gln Gln Gly Arg Glu Ala Thr	
5 10 15	
tgc agt ctg gtg ctg aag act cgt gtc agc cgg gag gag tgc tgt gct	195
Cys Ser Leu Val Leu Lys Thr Arg Val Ser Arg Glu Glu Cys Cys Ala	
20 25 30 35	
tcc ggc aac atc aac acc gcc tgg tcc aac ttc acc cac cca ggc aat	243
Ser Gly Asn Ile Asn Thr Ala Trp Ser Asn Phe Thr His Pro Gly Asn	
40 45 50	
aaa atc agc ctg cta ggg ttc ctg ggc ctc gtc cac tgc ctc ccc tgc	291
Lys Ile Ser Leu Leu Gly Phe Leu Gly Leu Val His Cys Leu Pro Cys	
55 60 65	
aaa gat tcc tgc gac gga gtg gag tgc ggc ccc ggc aag gcg tgc cgc	339
Lys Asp Ser Cys Asp Gly Val Glu Cys Gly Pro Gly Lys Ala Cys Arg	
70 75 80	
aat gct ggg ggg gcg tcc aac aac tgc gag tgc gtg ccc aac tgc gag	387
Asn Ala Gly Gly Ala Ser Asn Asn Cys Glu Cys Val Pro Asn Cys Glu	
85 90 95	
ggg ttt ccc gcg ggc ttc cag gtc tgc ggc tct gat ggc gcc acc tac	435
Gly Phe Pro Ala Gly Phe Gln Val Cys Gly Ser Asp Gly Ala Thr Tyr	
100 105 110 115	
cgg gac gaa tgc gaa ctg cgc acc gcg cgc tgt cgc gga cac cca gac	483
Arg Asp Glu Cys Glu Leu Arg Thr Ala Arg Cys Arg Gly His Pro Asp	
120 125 130	
ttg cgc gtc atg tac cgc ggc cgc tgt caa aag tct tgc gct cag gta	531
Leu Arg Val Met Tyr Arg Gly Arg Cys Gln Lys Ser Cys Ala Gln Val	
135 140 145	
gtg tgc ccg cgt ccc cag tgc tgc ctt gtg gat cag acc ggc agc gca	579
Val Cys Pro Arg Pro Gln Ser Cys Leu Val Asp Gln Thr Gly Ser Ala	
150 155 160	
cac tgc gtg gtg tgt cgc gct gcg ccc tgc cca gta cct tcc aac ccc	627
His Cys Val Val Cys Arg Ala Ala Pro Cys Pro Val Pro Ser Asn Pro	
165 170 175	

ggc caa gaa ctc tgt ggc aac aac aac gtt acc tac atc tcg tcg tgt 675  
Gly Gln Glu Leu Cys Gly Asn Asn Asn Val Thr Tyr Ile Ser Ser Cys  
180 185 190 195

cac ctg cgc cag gcc act tgc ttc ctg ggc cgc tcc att ggg gtt cgg 723  
His Leu Arg Gln Ala Thr Cys Phe Leu Gly Arg Ser Ile Gly Val Arg  
200 205 210

cac cca ggc atc tgc aca ggt ggc ccc aag ttc ctg aag tct ggc gat 771  
His Pro Gly Ile Cys Thr Gly Gly Pro Lys Phe Leu Lys Ser Gly Asp  
215 220 225

gct gcc att gtt gat atg gtc cct ggc aag ccc atg tgt gtt gag agc 819  
Ala Ala Ile Val Asp Met Val Pro Gly Lys Pro Met Cys Val Glu Ser  
230 235 240

ttc tct gac tac cct cca ctt ggt cgc ttt gct gtt cgt gac atg agg 867  
Phe Ser Asp Tyr Pro Pro Leu Gly Arg Phe Ala Val Arg Asp Met Arg  
245 250 255

cag aca gtt gct gtg ggt gtc atc aaa gct gtg gac aag aag gct gct 915  
Gln Thr Val Ala Val Gly Val Ile Lys Ala Val Asp Lys Lys Ala Ala  
260 265 270 275

gga gct ggc aaa gtc acc aag tct gcc cag aaa gct cag aag gct aaa 963  
Gly Ala Gly Lys Val Thr Lys Ser Ala Gln Lys Ala Gln Lys Ala Lys  
280 285 290

tgaatattac ccctaacc tgccacccca gtcttaataca gtggtgaag aacggtctca 1023  
gaactggttg tctcaattgg ccatttaagt ttaatagtaa aagactggtt aatgataaca 1083  
atgcacgta aaaccttcag aaggaaagaa tgttggtgac catttt 1129

<210> 11  
<211> 196  
<212> PRT  
<213> Mouse

<400> 11  
Val Leu Asn Gly Ser Ile Ser Pro Leu Trp Ala Val Ala Pro Thr Leu  
1 5 10 15  
Gln Val Leu Ser Leu Arg Asp Val Gly Leu Gly Ser Gly Ala Ala Glu  
20 25 30  
Met Asp Phe Ser Ala Phe Gly Asn Leu Arg Ala Leu Asp Leu Ser Gly  
35 40 45  
Asn Ser Leu Thr Ser Phe Gln Lys Phe Lys Gly Ser Leu Ala Leu Arg  
50 55 60  
Thr Leu Asp Leu Arg Arg Asn Ser Leu Thr Ala Leu Pro Gln Arg Val  
65 70 75 80  
Val Ser Glu Gln Pro Leu Arg Gly Leu Gln Thr Ile Tyr Leu Ser Gln  
85 90 95  
Asn Pro Tyr Asp Cys Cys Gly Val Glu Gly Trp Gly Ala Leu Gln Gln  
100 105 110  
His Phe Lys Thr Val Ala Asp Leu Ser Met Val Thr Cys Asn Leu Ser  
115 120 125  
Ser Lys Ile Val Arg Val Val Glu Leu Pro Glu Gly Leu Pro Gln Gly  
130 135 140

Cys Lys Trp Glu Gln Val Asp Thr Gly Leu Phe Tyr Leu Val Leu Ile  
 145 150 155 160  
 Leu Pro Ser Cys Leu Thr Leu Leu Val Ala Cys Thr Val Val Phe Leu  
 165 170 175  
 Thr Phe Lys Lys Pro Leu Leu Gln Val Ile Lys Ser Arg Cys His Trp  
 180 185 190  
 Ser Ser Ile Tyr  
 195

<210> 12  
 <211> 174  
 <212> PRT  
 <213> Mouse

<400> 12  
 Met Ala Pro Ala Asn Leu Gly Leu Thr Pro His Trp Val Met Leu Leu  
 1 5 10 15  
 Gly Ala Val Leu Leu Leu Leu Ser Gly Ala Ser Ala Gln Glu Pro  
 20 25 30  
 Pro Arg Val Gly Cys Ser Glu Tyr Thr Asn Arg Ser Cys Glu Glu Cys  
 35 40 45  
 Leu Arg Asn Val Ser Cys Leu Trp Cys Asn Glu Asn Lys Ala Cys Met  
 50 55 60  
 Asp Tyr Pro Val Arg Lys Ile Leu Pro Pro Ala Ser Leu Cys Lys Leu  
 65 70 75 80  
 Ser Ser Ala Arg Trp Gly Val Cys Trp Val Asn Phe Glu Ala Leu Ile  
 85 90 95  
 Ile Thr Met Ser Val Leu Gly Gly Ser Val Leu Leu Gly Ile Thr Val  
 100 105 110  
 Cys Cys Cys Tyr Cys Cys Arg Arg Lys Lys Ser Arg Lys Pro Asp Lys  
 115 120 125  
 Ser Asp Glu Arg Ala Met Arg Glu Gln Glu Glu Arg Arg Val Arg Gln  
 130 135 140  
 Glu Glu Arg Arg Ala Glu Met Lys Ser Arg His Asp Glu Ile Arg Lys  
 145 150 155 160  
 Lys Tyr Gly Leu Phe Lys Glu Gln Asn Pro Tyr Glu Lys Phe  
 165 170

<210> 13  
 <211> 106  
 <212> PRT  
 <213> Mouse

<400> 13  
 Ala Pro Gly Lys Pro Cys Arg Gly Leu Ser His Arg Thr Cys Ile Leu  
 1 5 10 15  
 Arg Cys Arg Pro Met Pro Leu Phe Thr His Pro Ser Pro Cys His Leu  
 20 25 30  
 Cys Gly Pro Cys Ser Thr Thr Ser Pro Ser Thr Trp Val Leu Cys Pro  
 35 40 45  
 Leu Pro Met Ser Pro Leu Cys Pro Thr Cys Val Ser Thr Met Thr Leu  
 50 55 60  
 Ala Thr Cys Thr Cys Pro Trp Ser Thr Thr Cys Pro Cys Thr Leu Ala  
 65 70 75 80  
 Pro Asn His Gly Ile Ala Ser Asp Thr Gln Ser Pro Val Ser Arg Ala  
 85 90 95  
 Glu Ser Val Gly Gly Pro Ser Leu Ile Phe

<210> 14  
 <211> 268  
 <212> PRT  
 <213> Mouse

<400> 14  
 Met Ala Leu Gly Phe Ser Gln Arg Ser Arg Met Val Ala Ala Gly Ala  
 1 5 10 15  
 Gly Val Thr Arg Leu Leu Val Leu Leu Met Val Ala Ala Pro  
 20 25 30  
 Ser Arg Ala Arg Gly Ser Gly Cys Arg Val Gly Ala Ser Ala Arg Gly  
 35 40 45  
 Thr Gly Ala Asp Gly Arg Glu Ala Glu Gly Cys Gly Thr Val Ala Leu  
 50 55 60  
 Leu Leu Glu His Ser Phe Glu Leu Gly Asp Gly Ala Asn Phe Gln Lys  
 65 70 75 80  
 Arg Gly Leu Leu Leu Trp Asn Gln Gln Asp Gly Thr Leu Ser Ala Thr  
 85 90 95  
 Gln Arg Gln Leu Ser Glu Glu Glu Arg Gly Arg Leu Arg Asp Val Ala  
 100 105 110  
 Ala Val Asn Gly Leu Tyr Arg Val Arg Val Pro Arg Arg Pro Gly Thr  
 115 120 125  
 Leu Asp Gly Ser Glu Ala Gly Gly His Val Ser Ser Phe Val Pro Ala  
 130 135 140  
 Cys Ser Leu Val Glu Ser His Leu Ser Asp Gln Leu Thr Leu His Val  
 145 150 155 160  
 Asp Val Ala Gly Asn Val Val Gly Leu Ser Val Val Val Tyr Pro Gly  
 165 170 175  
 Gly Cys Arg Gly Ser Glu Val Glu Asp Glu Asp Leu Glu Leu Phe Asn  
 180 185 190  
 Thr Ser Val Gln Leu Arg Pro Pro Ser Thr Ala Pro Gly Pro Glu Thr  
 195 200 205  
 Ala Ala Phe Ile Glu Arg Leu Glu Met Glu Gln Ala Gln Lys Ala Lys  
 210 215 220  
 Asn Pro Gln Glu Gln Lys Ser Phe Phe Ala Lys Tyr Trp Met Tyr Ile  
 225 230 235 240  
 Ile Pro Val Val Leu Phe Leu Met Met Ser Gly Ala Pro Asp Ala Gly  
 245 250 255  
 Gly Gln Gly Gly Gly Gly Gly Gly Ser Ser Arg  
 260 265

<210> 15  
 <211> 66  
 <212> PRT  
 <213> Mouse

<400> 15  
 Met Asp Phe Leu Val Leu Phe Leu Phe Tyr Leu Ala Phe Leu Leu Ile  
 1 5 10 15  
 Cys Val Val Leu Ile Cys Ile Phe Thr Lys Ser Gln Arg Leu Lys Ala  
 20 25 30  
 Val Val Leu Gly Gly Ala Gln Val Ala Leu Val Leu Gly Tyr Cys Pro  
 35 40 45  
 Asp Val Asn Thr Val Leu Gly Ala Ser Leu Glu Gly Ser Gln Asp Lys  
 50 55 60

Gly Met  
65

<210> 16  
<211> 338  
<212> PRT  
<213> Mouse

<400> 16  
Met Gly Ala Val Trp Ser Ala Leu Leu Val Gly Gly Gly Leu Ala Gly  
1 5 10 15  
Ala Leu Ile Leu Trp Leu Leu Arg Gly Asp Ser Gly Ala Pro Gly Lys  
20 25 30  
Asp Gly Val Ala Glu Pro Pro Gln Lys Gly Ala Pro Pro Gly Glu Ala  
35 40 45  
Ala Ala Pro Gly Asp Gly Pro Gly Gly Gly Ser Gly Gly Leu Ser  
50 55 60  
Pro Glu Pro Ser Asp Arg Glu Leu Val Ser Lys Ala Glu His Leu Arg  
65 70 75 80  
Glu Ser Asn Gly His Leu Ile Ser Glu Ser Lys Asp Leu Gly Asn Leu  
85 90 95  
Pro Glu Ala Gln Arg Leu Gln Asn Val Gly Ala Asp Trp Val Asn Ala  
100 105 110  
Arg Glu Phe Val Pro Val Gly Lys Ile Pro Asp Thr His Ser Arg Ala  
115 120 125  
Asp Ser Glu Ala Ala Arg Asn Gln Ser Pro Gly Ser His Gly Gly Glu  
130 135 140  
Trp Arg Leu Pro Lys Gly Gln Glu Thr Ala Val Lys Val Ala Gly Ser  
145 150 155 160  
Val Ala Ala Lys Leu Ala Ser Ser Ser Leu Leu Val Asp Arg Ala Lys  
165 170 175  
Ala Val Ser Gln Asp Gln Ala Gly His Glu Asp Trp Glu Val Val Ser  
180 185 190  
Arg His Ser Ser Trp Gly Ser Val Gly Leu Gly Gly Ser Leu Glu Ala  
195 200 205  
Ser Arg Leu Ser Leu Asn Gln Arg Met Asp Asp Ser Thr Asn Ser Leu  
210 215 220  
Val Gly Gly Arg Gly Trp Glu Val Asp Gly Lys Val Ala Ser Leu Lys  
225 230 235 240  
Pro Gln Gln Val Ser Ile Gln Phe Gln Val His Tyr Thr Thr Asn Thr  
245 250 255  
Asp Val Gln Phe Ile Ala Val Thr Gly Asp His Glu Ser Leu Gly Arg  
260 265 270  
Trp Asn Thr Tyr Ile Pro Leu His Tyr Cys Lys Asp Gly Leu Trp Ser  
275 280 285  
His Ser Val Phe Leu Pro Ala Asp Thr Val Val Glu Trp Lys Phe Val  
290 295 300  
Leu Val Glu Asn Lys Glu Val Thr Arg Trp Glu Glu Cys Ser Asn Arg  
305 310 315 320  
Phe Leu Gln Thr Gly His Glu Asp Lys Val His Gly Trp Trp Gly  
325 330 335  
Ile His

<210> 17  
<211> 119  
<212> PRT

<213> Mouse

<400> 17  
 Gly Thr Ser Pro Ala Ser Val Leu Arg Ser Val Ser Ser Asp Pro Ser  
 1 5 10 15  
 Leu Pro Pro Pro Ser Met Ala Ser Leu Cys Cys Gly Pro Lys Leu  
 20 25 30  
 Ala Ala Cys Gly Ile Val Leu Ser Ala Trp Gly Val Ile Met Leu Ile  
 35 40 45  
 Met Leu Gly Ile Phe Phe Asn Val His Ser Ala Val Leu Ile Glu Asp  
 50 55 60  
 Val Pro Phe Thr Glu Lys Asp Phe Glu Asn Gly Pro Gln Asn Ile Tyr  
 65 70 75 80  
 Asn Leu Tyr Glu Gln Val Ser Tyr Asn Cys Phe Ile Ala Ala Gly Leu  
 85 90 95  
 Tyr Leu Leu Leu Gly Gly Phe Ser Phe Cys Gln Val Arg Leu Asn Lys  
 100 105 110  
 Arg Lys Glu Tyr Met Val Arg  
 115

<210> 18

<211> 280

<212> PRT

<213> Mouse

<400> 18  
 Met Val Pro Trp Phe Leu Leu Ser Leu Leu Leu Ala Arg Pro Val  
 1 5 10 15  
 Pro Gly Val Ala Tyr Ser Val Ser Leu Pro Ala Ser Phe Leu Glu Asp  
 20 25 30  
 Val Ala Gly Ser Gly Glu Ala Glu Gly Ser Ser Ala Ser Ser Pro Ser  
 35 40 45  
 Leu Pro Pro Pro Gly Thr Pro Ala Phe Ser Pro Thr Pro Glu Arg Pro  
 50 55 60  
 Gln Pro Thr Ala Leu Asp Gly Pro Val Pro Thr Asn Leu Leu Glu  
 65 70 75 80  
 Gly Ile Met Asp Phe Phe Arg Gln Tyr Val Met Leu Ile Ala Val Val  
 85 90 95  
 Gly Ser Leu Thr Phe Leu Ile Met Phe Ile Val Cys Ala Ala Leu Ile  
 100 105 110  
 Thr Arg Gln Lys His Lys Ala Thr Ala Tyr Tyr Pro Ser Ser Phe Pro  
 115 120 125  
 Glu Lys Lys Tyr Val Asp Gln Arg Asp Arg Ala Gly Gly Pro Arg Thr  
 130 135 140  
 Phe Ser Glu Val Pro Asp Arg Ala Pro Asp Ser Arg His Glu Glu Gly  
 145 150 155 160  
 Leu Asp Thr Ser His Gln Leu Gln Ala Asp Ile Leu Ala Ala Thr Gln  
 165 170 175  
 Asn Leu Arg Ser Pro Ala Arg Ala Leu Pro Gly Asn Gly Glu Gly Ala  
 180 185 190  
 Lys Pro Val Lys Gly Gly Ser Glu Glu Glu Glu Glu Val Leu Ser  
 195 200 205  
 Gly Gln Glu Glu Ala Gln Glu Ala Pro Val Cys Gly Val Thr Glu Glu  
 210 215 220  
 Lys Leu Gly Val Pro Glu Glu Ser Val Ser Ala Glu Ala Glu Gly Val  
 225 230 235 240  
 Pro Ala Thr Ser Glu Gly Gln Gly Glu Ala Glu Gly Ser Phe Ser Leu

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245 250 255  
Ala Gln Glu Ser Gln Gly Ala Thr Gly Pro Glu Ser Pro Cys Ala  
260 265 270  
Cys Asn Arg Val Ser Pro Ser Val  
275 280

<210> 19  
<211> 188  
<212> PRT  
<213> Mouse

<400> 19  
Met Ala Leu Cys Ala Arg Ala Ala Leu Leu Gly Val Leu Gln Val  
1 5 10 15  
Leu Ala Leu Leu Gly Ala Ala Gln Asp Pro Thr Asp Ala Gln Gly Ser  
20 25 30  
Ala Ser Gly Asn His Ser Val Leu Thr Ser Asn Ile Asn Ile Thr Glu  
35 40 45  
Asn Thr Asn Gln Thr Met Ser Val Val Ser Asn Gln Thr Ser Glu Met  
50 55 60  
Gln Ser Thr Ala Lys Pro Ser Val Leu Pro Lys Thr Thr Thr Leu Ile  
65 70 75 80  
Thr Val Lys Pro Ala Thr Ile Val Lys Ile Ser Thr Pro Gly Val Leu  
85 90 95  
Pro His Val Thr Pro Thr Ala Ser Lys Ser Thr Pro Asn Ala Ser Ala  
100 105 110  
Ser Pro Asn Ser Thr His Thr Ser Ala Ser Met Thr Thr Pro Ala His  
115 120 125  
Ser Ser Leu Leu Thr Thr Val Thr Val Ser Ala Thr Thr His Pro Thr  
130 135 140  
Lys Gly Lys Gly Ser Lys Phe Asp Ala Gly Ser Phe Val Gly Gly Ile  
145 150 155 160  
Gly Val Asn Thr Gly Ser Phe Ile Tyr Ser Leu His Trp Met Gln Asn  
165 170 175  
Val Leu Phe Lys Lys Arg His Ser Val Pro Lys His  
180 185

<210> 20  
<211> 317  
<212> PRT  
<213> Mouse

<400> 20  
Met Arg Ser Gly Ala Leu Trp Pro Leu Leu Trp Gly Ala Leu Val Trp  
1 5 10 15  
Thr Val Gly Ser Val Gly Ala Val Met Gly Ser Glu Asp Ser Val Pro  
20 25 30  
Gly Gly Val Cys Trp Leu Gln Gln Gly Arg Glu Ala Thr Cys Ser Leu  
35 40 45  
Val Leu Lys Thr Arg Val Ser Arg Glu Glu Cys Cys Ala Ser Gly Asn  
50 55 60  
Ile Asn Thr Ala Trp Ser Asn Phe Thr His Pro Gly Asn Lys Ile Ser  
65 70 75 80  
Leu Leu Gly Phe Leu Gly Leu Val His Cys Leu Pro Cys Lys Asp Ser  
85 90 95  
Cys Asp Gly Val Glu Cys Gly Pro Gly Lys Ala Cys Arg Asn Ala Gly  
100 105 110

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